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MAR 16 1981

Honorable Henry M. Jackson
United States Courthouse
Room 802
Seattle, Washington 98104

USEPA SF



1212960

Dear Senator Jackson:

Thank you for your inquiries of February 25 and 27, 1981 which included the letters from Mr. Dion and Mr. Bender concerning PCB contamination in the Duwamish Waterway. The following information is provided in response to your inquiry.

On September 13, 1974 an electric transformer destined for arctic service was dropped and broken on the north pier of Slip 1 of the Duwamish River. The transformer's contents, (255 gallons of PCB-1242), spilled into Slip 1. Because PCB-1242 is highly insoluble and of greater density than water, the majority of the spill was localized in pools near the north dock face at the bottom of Slip 1.

EPA immediately instituted a program to recover the spilled material. Based on sampling data, EPA successfully recovered at least 235 gallons (92%) of the PCB-1242 spilled. Approximately 20 gallons are unaccounted for although sampling of the remaining bottom sediments in the impact area indicated that the clean-up operation had substantially reduced PCB-1242 concentrations in the area. Additionally, sediment sampling in the remaining waterward area of Slip 1 resulted in discovery of only trace amounts of the PCB-1242 above background levels.

In 1978 the National Marine Fisheries Service, (NOAA) undertook a study to sample bottom sediments and various organisms which inhabit those sediments. One of the major results of the study is that bottom flatfish (English Sole) which live in the Duwamish waterway sediments have an abnormally large number of lesions and tumors. Because of the successful recovery and the relative confinement of PCB-1242 within Slip 1, we do not believe that the 1974 spill is responsible for the abnormalities. The exact cause of the abnormalities is unknown but bottom sediment sampling undertaken by NOAA and various other agencies indicates that

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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PCB-1260 (not contained in the transformer which spilled into Slip 1); heavy metals such as zinc, cadmium, and copper; and organic compounds such as benzo-a-pyrene, benzanthrane, and polychlorinated butadienes are all present in the Duwamish sediments. Due to the complexity of environmental factors such as genetic variability, stress, diet, as well as the polluted nature of the sediments, it is impossible to identify whether a single cause or synergistic type action is responsible for the abnormalities found in these bottom fish. One would suspect, however, that the numbers and quantities of toxic pollutants in the sediments may be a contributing factor.

It appears that the abnormalities discovered by NOAA are confined largely to bottom flatfish and not found in free swimming fish. There is concern, however, that contaminants found in bottom species may be entering mid water species which feed on organisms inhabiting the bottom substrate. The extent of pollutant uptake is being studied by NOAA scientists. At present, samples of muscle tissue are being analyzed from salmon, cod, and other edible species found in the Elliott Bay area. It is our understanding that the results of these studies will be available in the near future.

The concern expressed over disposal of polluted Duwamish dredge material is an issue that EPA has been dealing with for several years. In order to gain EPA approval for in-water disposal, the proposed dredged material must be analyzed for the various pollutants, including PCB's. If pollutant concentrations are low, in-water disposal at 4-Mile Rock disposal site in Elliott Bay may be allowed. If the concentrations are high, up-land disposal is required. To date no environmental impact statements have been required because the volume of dredged material and the concentration of pollutants were small enough to indicate that significant environmental impacts would not occur.

Such is not the case for a project being proposed by the U.S. Army Corps of Engineers (COE) to widen and deepen the Duwamish Waterway navigation channel. Proposed plans estimate that approximately 2.8 million cubic yards of material would be dredged, with the majority of the material dumped at the 4-Mile Rock in-water disposal site. Due to the size of this project and the presence of a variety of pollutants in the sediments, EPA has informed the COE that no approval for in-water disposal

CONCURRENCES							
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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will be given until bioassay studies are completed and the results demonstrate that the material will not adversely affect the aquatic environment. In addition, the COE is undertaking a complete environmental assessment which will accompany its request to Congress for funding of the project.

In summary, it is unlikely that the 1974 PCB-1242 spill is responsible for the lesions and tumors found in Duwamish Waterway flatfish. Although a clear cause and effect relationship for a high incidence of lesions and tumors in flatfish has not been established, it is more likely that a combination of several environmental factors, including general sediment contamination from a variety of pollutants, are involved. As such, disposal of dredged material from the Duwamish waterway will continue to be monitored to assure that in-water disposal of this material will not have a significant adverse impact on water quality and aquatic resources.

Should you have any questions, I would be pleased to assist you. Questions may also be directed to Carl Kassebaum at (206) 442-1352.

Sincerely,

/s/ Donald P. Dubois

Donald P. Dubois
Regional Administrator

cc: Dr. Donald C. Malins, NOAA
Colonel Leon K. Moraski, COE
John Spencer, WDE

Kassebaum:bl/lep/3/10/81:0652N

CONCURRENCES

SYMBOL	Kassebaum	Lee	Geren	Reed	Osborne	O Neal	Watson
SURNAME	Neilsen	Corte					
DATE	3-13-81						

Kassebaum:bl/lep/3/10/81:0652N

CONCURRENCES									
SYMBOL	CF	Lee	Lee	Reed	Reed	Osborn	Neal	Watson	
SURNAME	Kassebaum	Kassebaum	Lee	Reed	Reed	Osborn	Neal	Watson	
DATE	3/11/81	3/11/81	3/11/81	3/11	3/11	3/11	3/17/81	3/17/81	
EPA Form 1320-1 (12-79)	Coate								

OFFICIAL FILE COPY

FROM Senator Jackson			CONTROL NO. ENF-81-26
SUBJECT AND DATE Inquiry from (b) (6) re dredging of Duwamish and PCB content (2-8-81)			DATE REC'D 3-4-81
			DUE DATE 3-10 (Mary Nielson)
REFERRED (1) Ceren	(2)	(3)	(4)
DATE 3-4			
REPLY SENT TO			DATE RELEASED
REMARKS Reply to Sen. Jackson at Seattle office for DUBOIS signature. Follow instructions in Sen. Jackson's letter and Neilson memo.			ACKNOWLEDGED - DATE <input type="checkbox"/>
			NO ANSWER NEEDED <input type="checkbox"/> (Explain in remarks)

M/S 517

Control No. 81-16

TO: *Enforcement*

FROM: MARY M. NEILSON, C&IR

DATE: *2/3/81*

RETURN ON OR BEFORE COB *2/10/81*

☒ PLEASE PREPARE RESPONSE FOR THE
SIGNATURE OF RA DONALD P. DUBOIS.

☐ PLEASE PREPARE RESPONSE FOR THE
SIGNATURE OF ADMINISTRATOR
DOUGLAS M. COSTLE*

*PREPARED LETTER SHOULD HAVE ALL
NECESSARY CONCURRENCES FOR REGION 10
FILES AS LETTER WILL BE SENT VIA
DATA PHONE.

☐ PLEASE PHONE M. NEILSON 2-4280
REGARDING ATTACHED.

☒ PLEASE RETURN ATTACHED MATERIAL
WITH RESPONSE.

NOTE: *Mary Nielson concurs on all
Congressional inquiries.*

JAMES A. MC CLURE, IDAHO, CHAIRMAN

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United States Senate

COMMITTEE ON
ENERGY AND NATURAL RESOURCES
WASHINGTON, D.C. 20510

MICHAEL D. HATHAWAY, STAFF DIRECTOR
CHARLES A. TRABANDT, CHIEF COUNSEL
DANIEL A. DREYFUS, STAFF DIRECTOR FOR THE MINORITY

February 27, 1981

Mrs. Mary Neilson
Environmental Protection Agency
1200 Sixth Avenue
M/S 609
Seattle, Washington 98101

re:DION, Ray

Dear Mrs. Neilson:

The enclosed is respectfully submitted to you for every proper consideration. Please provide me with a report in duplicate and send your response and the enclosure directly to my Seattle office at 802 United States Courthouse, Seattle, Washington, 98104; telephone 206/442-7476, FTS 399-7476.

Sincerely yours,

Henry M. Jackson
Henry M. Jackson, U.S.S.

HMJ: mc

Enclosure

RECEIVED

MAR. 4 1981

ENFORCEMENT DIVISION
EPA - REGION 10

REC'D FEB 26 1981

2/8/81

To: Senator Henry M. Jackson

Re: Dredging of Duwamish River

FEB 13 5 17 AM '81

Dear Sir,

I would like to let you know I'm very concerned about the dredging of the Duwamish River by the Army Corps of Engineer. The reason for this concern is due to the PCB content in the sludge of the Duwamish from the accident awhile back when PCB's were released into the river via a transformer spill. Not all of the PCB was cleaned up. Where are the future dredgings going to be dumped? Some past dredgings (since the accident) have already been dumped into ~~the~~ Elliott Bay. Was an environmental impact statement made for these dumps? If not, why? I do not feel PCB's in Puget Sound is a matter that should be taken lightly. Do you have any concerns on this matter?

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